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TRANSMITTAL FORM

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Total Number of Pages in This Submission: 5

Application Number	10/664,628
Filing Date	09/19/2003
First Named Inventor	K. Inoue
Art Unit	1771
Examiner Name	A. Piziali
Attorney Docket Number	KIN90USA

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment/Reply
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  - ☐ Affidavits/declaration(s)
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- ☐ Certified Copy of Priority Document(s)
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- ☐ After Allowance Communication to TC
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- ☐ Proprietary Information
- ☐ Status Letter
- ☐ Other Enclosure(s) (please Identify below):

Remarks

REPLY BRIEF IN RESPONSE TO THE EXAMINER'S ANSWER DATED NOVEMBER 3, 2006

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

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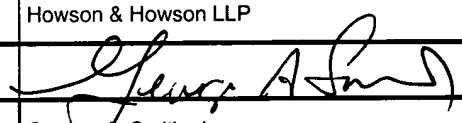
Signature			
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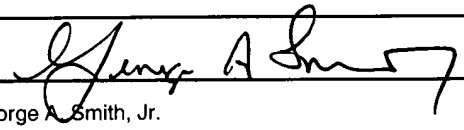
Signature			
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application No.: 10/664628
Applicant: K. Inoue
Filed: 09/19/2003
TC/A.U.: 1771
Examiner: A. Piziali
Docket No.: KIN90USA
Customer No. 00270

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REPLY BRIEF

MAIL STOP Appeal Brief - Patents
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

This reply brief is responsive to the Examiner's Answer dated November 3, 2006.

The Examiner has not demonstrated that Hagfors teaches that the average length of protruding parts of embedded fibers are, or should be, within the range of 0.01 and 3 mm.

After noting that the cited Hagfors patent says that "the fibers on the surface maintain a certain microscopic roughness on

it," (Hagfors, col. 1, lines 65-67), the Examiner gives an explanation of Ra, a measure of surface roughness used in Hagfors at column 4, line 27, and argues that the surface roughness in Hagfors is directly related to the heights of the protruding fibers.

The Examiner contends that, with a surface roughness Ra in the range from 0.001 to 0.03 mm, the average height of the protruding parts of the fibers would be in the range of 0.004 to 0.12 mm, which overlaps the applicant's claimed range. The applicant's claims refer not to height, but to "average length." The average height value can be translated to average length only by assuming a particular fiber angle distribution. For example, if a random distribution of fiber angles is assumed, the lengths of the exposed parts of the fibers would be in the range from 0.004/sin45° (approximately 0.006 mm) to 0.12/sin45° (approximately 0.17mm).

The range of 0.006 mm to 0.17 mm, of course, overlaps the applicant's range of 0.01 to 3.0 mm. However, as seen in Hagfors' FIG. 1, the angles of the fibers do not have a uniform distribution. They are not disposed at random angles with

respect to the surface of the belt, but are instead all shown nearly parallel to the surface of the belt. Some of the fibers 3 reach the surface of the belt and are exposed, and some of the fibers 3 are situated below the surface. Some of the fibers at the surface are exposed along their entire lengths. Others are exposed only along parts of their lengths. Of the fibers that are exposed, on the average, half the fiber length would be exposed at the surface. As Hagfors points out (at column 3, line 13) the fibers are typically 10 to 150 mm in length. In addition, as Hagfors points out, it is the polymer layer that is ground to expose the fibers (Hagfors, column 2, lines 47-49); Hagfors does not say that the fibers are shortened by grinding. Indeed, the fibers 3, parts of which are exposed at the surface, are depicted in lengths comparable to the lengths of the fibers underneath the surface. Finally, Hagfors gives an example of a range of 3.1 - 67 dtex (Hagfors, column 3, line 9), and points out that the fibers can be microfibers having a fineness less than 2 dtex[1] (Hagfors, column 3, line 11). It is entirely

[1]Dtex (decitex) is a measure of fineness having the dimensions of mass/length. 1 dtex = 1 gram per 10,000 meters.

possible for a fiber, having a length of 10 mm or more and having a fineness within the ranges described by Hagfors, to be present at the surface of a resin-impregnated batt layer without causing the surface roughness Ra of the layer to exceed 30 μm (0.03 mm) or to fall below 1 μm (0.001 mm).

It follows that Hagfors' surface roughness range, 0.001 to 0.03 mm (which is a measure of height), is entirely consistent with a total fiber length of 10 mm as set forth in Hagfors at column 3, line 13. And, even if the average fiber length is as low as 10 mm, the exposed parts would have an average length of at least 5 mm, which is well outside the Applicant's claimed range of 0.01 to 3 mm.

Respectfully submitted,
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By _____

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